SELECTION

Perfection
in price too

The standard line for turning from CERATIZIT

CERATIZIT is a high-technology engineering group specialised in cutting tools and hard material solutions.

Tooling a Sustainable Future

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CERATIZIT GROUP

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CERATIZIT \ Standard

Quality tools for standard applications.

The quality tools of the **CERATIZIT Standard** product line are high quality, powerful and reliable and enjoy the highest trust of our customers worldwide. Tools from this product line are the first choice for many standard applications and guarantee optimal results.

Overview of inserts

Negative

			P Steel	M Stainless steel	K Cast iron	N Non-ferrous metals	S Heat-resistant	H Tempered steel	O Non-metal materials	Geometry CN..	DN..	VN..	WN..
Fine – Medium	-FMS		•	○						3	4	5	6
Medium – Rough	-MRS		•	○						3	4		6

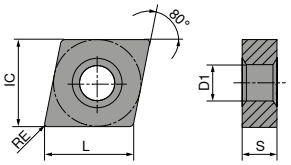
Positive

										Geometry CC..	DC..	VC..
Fine – Medium	-FMS		•	○						7	8	9
Medium – Rough	-MRS		•	○						7	8	9

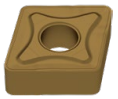
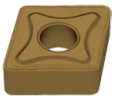
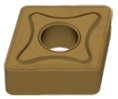
Matching tool holders and boring bars can be found in our main catalogue → **Chapter 9, Turning tools**

CNMG

Designation	L mm	S mm	D1 mm	IC mm
CNMG 1204..	12,9	4,76	5,16	12,70
CNMG 1606..	16,1	6,35	6,35	15,87
CNMG 1906..	19,3	6,35	7,94	19,05

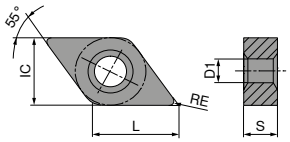


CNMG

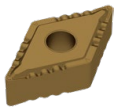
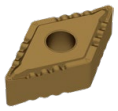
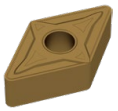
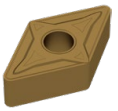
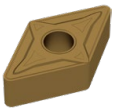
		-FMS CT-P15	-FMS CT-P25	-MRS CT-P15	-MRS CT-P25	-MRS CT-P35
						
		F CNMG	F CNMG	M CNMG	M CNMG	M CNMG
		75 302 ...	75 302 ...	75 303 ...	75 303 ...	75 303 ...
ISO	RE mm					
120404EN	0,4	02809	12809			
120408EN	0,8	03009	13009	03009	13009	23009
120412EN	1,2	03209	13209	03209	13209	23209
120416EN	1,6			03409	13409	23409
160612EN	1,2			04409	14409	24409
160616EN	1,6			04609	14609	24609
190612EN	1,2			05609	15609	25609
190616EN	1,6			05809	15809	25809
P		●	●	●	●	●
M		○	○	○	○	○
K						
N						
S						
H						
O						

DNMG

Designation	L mm	S mm	D1 mm	IC mm
DNMG 1506..	15,5	6,35	5,16	12,7

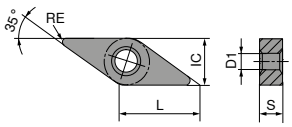


DNMG

		-FMS CT-P15	-FMS CT-P25	-MRS CT-P15	-MRS CT-P25	-MRS CT-P35
						
		F	F	M	M	M
		DNMG	DNMG	DNMG	DNMG	DNMG
		75 306 ...	75 306 ...	75 307 ...	75 307 ...	75 307 ...
ISO	RE mm					
150404EN	0,4	01609	11609			
150408EN	0,8	01809	11809	01809	11809	
150604EN	0,4	02809	12809			
150608EN	0,8	03009	13009	03009	13009	23009
150612EN	1,2	03209	13209	03209	13209	23209
150616EN	1,6			03409	13409	23409
P		●	●	●	●	●
M		○	○	○	○	○
K						
N						
S						
H						
O						

VNMG

Designation	L mm	S mm	D1 mm	IC mm
VNMG 1604..	16,6	4,76	3,81	9,52

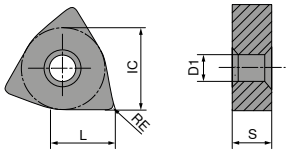


VNMG

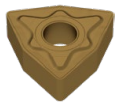
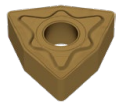
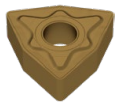
	-FMS CT-P15	-FMS CT-P25
		
	F VNMG	F VNMG
	75 310 ...	75 310 ...
ISO RE mm		
160404EN 0,4	**01609**	**11609**
160408EN 0,8	**01809**	**11809**
P	●	●
M	○	○
K		
N		
S		
H		
O		

WNMG

Designation	L mm	S mm	D1 mm	IC mm
WNMG 0804..	8,6	4,76	5,16	12,7

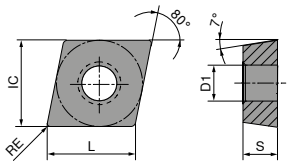


WNMG

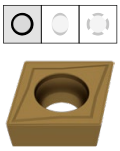
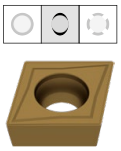
		-FMS CT-P15	-FMS CT-P25	-MRS CT-P15	-MRS CT-P25	-MRS CT-P35
						
		F WNMG	**F** WNMG	**M** WNMG	**M** WNMG	**M** WNMG
		75 311 ...	**75 311 ...**	**75 312 ...**	**75 312 ...**	**75 312 ...**
ISO	RE mm					
080404EN	0,4	**01609**	**11609**			
080408EN	0,8	**01809**	**11809**	**01809**	**11809**	**21809**
080412EN	1,2	**02009**	**12009**	**02009**	**12009**	**22009**
P		●	●	●	●	●
M		○	○	○	○	○
K						
N						
S						
H						
O						

CCMT

Designation	L mm	S mm	D1 mm	IC mm
CCMT 09T3..	9,7	3,97	4,4	9,52
CCMT 1204..	12,9	4,76	5,5	12,70

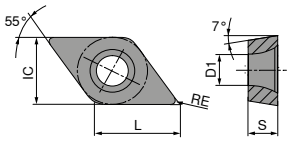


CCMT

	-FMS CT-P15	-FMS CT-P25	-MRS CT-P15	-MRS CT-P25
				
	F CCMT	F CCMT	M CCMT	M CCMT
	75 300 ...	75 300 ...	75 301 ...	75 301 ...
ISO / RE mm				
09T304EN 0,4	01609	11609	01609	11609
09T308EN 0,8	01809	11809	01809	11809
120404EN 0,4	02809	12809	02809	12809
120408EN 0,8	03009	13009	03009	13009
120412EN 1,2			03209	13209
P	●	●	●	●
M	○	○	○	○
K				
N				
S				
H				
O				

DCMT

Designation	L mm	S mm	D1 mm	IC mm
DCMT 0702..	7,75	2,38	2,8	6,35
DCMT 11T3..	11,60	3,97	4,4	9,52

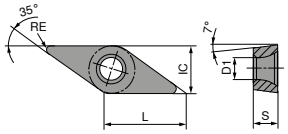


DCMT

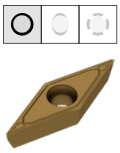
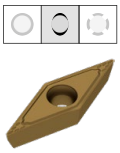
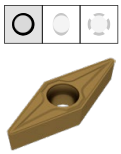
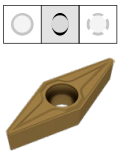
		-FMS CT-P15	-FMS CT-P25	-MRS CT-P15	-MRS CT-P25
					
		F DCMT	F DCMT	M DCMT	M DCMT
ISO	RE mm	75 304 ...	75 304 ...	75 305 ...	75 305 ...
070204EN	0,4	00409	10409	00409	10409
070208EN	0,8	00609	10609	00609	10609
11T304EN	0,4	01609	11609	01609	11609
11T308EN	0,8	01809	11809	01809	11809
P		●	●	●	●
M		○	○	○	○
K					
N					
S					
H					
O					

VCMT

Designation	L mm	S mm	D1 mm	IC mm
VCMT 1103..	11,1	3,18	2,9	6,35
VCMT 1604..	16,6	4,76	4,4	9,52



VCMT

	-FMS CT-P15	-FMS CT-P25	-MRS CT-P15	-MRS CT-P25
				
	F VCMT	**F** VCMT	**M** VCMT	**M** VCMT
	75 308 ...	**75 308 ...**	**75 309 ...**	**75 309 ...**
ISO RE mm				
110304EN 0,4	**01609**	**11609**		
160404EN 0,4	**02809**	**12809**	**02809**	**12809**
160408EN 0,8	**03009**	**13009**	**03009**	**13009**
P	●	●	●	●
M	○	○	○	○
K				
N				
S				
H				
O				

Cutting data approximate values

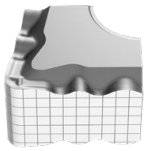
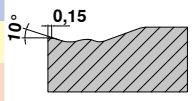
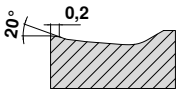
	Material sub-group	Index	Composition / Structure / Heat treatment		Tensile strength N/mm²* / HB / HRC	CT-P15	CT-P25	CT-P35
						v_c in m/min		
P	Unalloyed steel	P.1.1	< 0,15 % C	Annealed	420 N/mm² / 125 HB	290	235	165
		P.1.2	< 0,45 % C	Annealed	640 N/mm² / 190 HB	250	200	140
		P.1.3		Tempered	840 N/mm² / 250 HB	215	170	115
		P.1.4	< 0,75 % C	Annealed	910 N/mm² / 270 HB	200	160	110
		P.1.5		Tempered	1010 N/mm² / 300 HB	185	145	100
	Low-alloy steel	P.2.1		Annealed	610 N/mm² / 180 HB	260	210	145
		P.2.2		Tempered	930 N/mm² / 275 HB	200	155	105
		P.2.3		Tempered	1010 N/mm² / 300 HB	185	145	95
		P.2.4		Tempered	1200 N/mm² / 375 HB	135	105	65
	High-alloy steel and high-alloy tool steel	P.3.1		Annealed	680 N/mm² / 200 HB	160	135	120
		P.3.2		Hardened and tempered	1100 N/mm² / 300 HB	115	85	75
		P.3.3		Hardened and tempered	1300 N/mm² / 400 HB	65	34	26
	Stainless steel	P.4.1	Ferritic / martensitic	Annealed	680 N/mm² / 200 HB	160	135	120
		P.4.2	Martensitic	Tempered	1010 N/mm² / 300 HB	140	110	100
M	Stainless steel	M.1.1	Austenitic / austenitic-ferritic	Quenched	610 N/mm² / 180 HB	150	130	120
		M.2.1	Austenitic	Tempered	300 HB	125	105	75
		M.3.1	Austenitic / ferritic (Duplex)		780 N/mm² / 230 HB	140	120	110
K	Grey cast iron	K.1.1	Pearlitic / ferritic		350 N/mm² / 180 HB			
		K.1.2	Pearlitic (martensitic)		500 N/mm² / 260 HB			
	Spherulitic graphite cast iron	K.2.1	Ferritic		540 N/mm² / 160 HB			
		K.2.2	Pearlitic		845 N/mm² / 250 HB			
	Malleable iron	K.3.1	Ferritic		440 N/mm² / 130 HB			
		K.3.2	Pearlitic		780 N/mm² / 230 HB			
N	Aluminium wrought alloy	N.1.1	Non-hardenable		60 HB			
		N.1.2	Hardenable	Age-hardened	340 N/mm² / 100 HB			
	Cast aluminium alloy	N.2.1	≤ 12 % Si, non-hardenable		250 N/mm² / 75 HB			
		N.2.2	≤ 12 % Si, hardenable	Age-hardened	300 N/mm² / 90 HB			
		N.2.3	> 12 % Si, non-hardenable		440 N/mm² / 130 HB			
	Copper and copper alloys (bronze/brass)	N.3.1	Free-machining alloys, PB > 1 %		375 N/mm² / 110 HB			
		N.3.2	CuZn, CuSnZn		300 N/mm² / 90 HB			
		N.3.3	CuSn, lead-free copper and electrolytic copper		340 N/mm² / 100 HB			
	Magnesium alloys	N.4.1	Magnesium and magnesium alloys		70 HB			
S	Heat-resistant alloys	S.1.1	Fe - basis	Annealed	680 N/mm² / 200 HB			
		S.1.2		Age-hardened	950 N/mm² / 280 HB			
		S.2.1	Ni or Co basis	Annealed	840 N/mm² / 250 HB			
		S.2.2		Age-hardened	1180 N/mm² / 350 HB			
		S.2.3		Cast	1080 N/mm² / 320 HB			
	Titanium alloys	S.3.1	Pure titanium		400 N/mm²			
		S.3.2	Alpha + beta alloys	Age-hardened	1050 N/mm² / 320 HB			
		S.3.3	Beta alloys		1400 N/mm² / 410 HB			
H	Hardened steel	H.1.1		Hardened and tempered	46–55 HRC			
		H.1.2		Hardened and tempered	56–60 HRC			
		H.1.3		Hardened and tempered	61–65 HRC			
		H.1.4		Hardened and tempered	66–70 HRC			
	Chilled iron	H.2.1		Cast	400 HB			
	Hardened cast iron	H.3.1		Hardened and tempered	55 HRC			
O	Non-metal materials	O.1.1	Plastics, duroplastic		≤ 150 N/mm²			
		O.1.2	Plastics, thermoplastic		≤ 100 N/mm²			
		O.2.1	Aramid fibre-reinforced		≤ 1000 N/mm²			
		O.2.2	Glass/carbon-fibre reinforced		≤ 1000 N/mm²			
		O.3.1	Graphite					

*** Tensile strength**

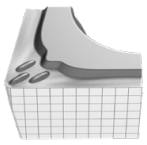
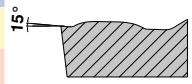
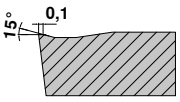
The cutting data depends extremely on the external conditions, e.g. stability of the tool and tool clamping, material and machine type.
The indicated values are possible cutting data which have to be increased or reduced according to the application conditions.

Standard chip breakers / application notes

Negative

	Model	Smooth cut	Irregular cutting depth	Interrupted cut	Sectional illustration a_p mm	Sectional illustration f mm	Geometry
-FMS ▲ Finishing to medium machining ▲ very good chip control ▲ universal chip breaker ▲ low cutting forces	 F M	**CT-P15 / CT-P25** CT-P15 / CT-P25	CT-P15 / **CT-P25** CT-P25	CT-P25	 0,40–3,00	0,10–0,30	CN.. DN.. VN.. WN..
-MRS ▲ medium to rough machining ▲ well suited for components with cast crust or forged skin ▲ works well with interrupted cuts	 M R	**CT-P15 / CT-P25 / CT-P35** CT-P15 / CT-P25	**CT-P15 / CT-P25 / CT-P35** CT-P25 / CT-P35	**CT-P25 / CT-P35** CT-P35	 0,50–4,50	0,20–0,60	CN.. DN.. WN..

Positive

	Model	Smooth cut	Irregular cutting depth	Interrupted cut	Sectional illustration a_p mm	Sectional illustration f mm	Geometry
-FMS ▲ Finishing to medium machining ▲ very good chip control ▲ universal chip breaker ▲ low cutting forces	 F M	**CT-P15 / CT-P25** CT-P15 / CT-P25	**CT-P15 / CT-P25** CT-P15 / CT-P25	CT-P25	 0,10–2,00	0,05–0,20	CC.. DC.. VC..
-MRS ▲ light to medium roughing ▲ universal chip breaker ▲ stable cutting edge	 M R	**CT-P15 / CT-P25** CT-P15 / CT-P25	**CT-P15 / CT-P25** CT-P15 / CT-P25	**CT-P25**	 0,15–3,50	0,15–0,35	CC.. DC.. VC..

Grade description

CT-P15
- ▲ Carbide, coated
- ▲ ISO | **P15** | M10
- ▲ Wear-resistant standard steel grade for smooth cut

CT-P25
- ▲ Carbide, coated
- ▲ ISO | **P25** | M20
- ▲ Standard steel grade for universal steel machining

CT-P35
- ▲ Carbide, coated
- ▲ ISO | **P35** | M25
- ▲ Tough standard steel grade for interrupted cutting

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